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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/331,829 | 06/23/1999 | HIROSHI SUZUKI | 1576.77 | 2131 |

7590 04/24/2002

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EXAMINER

SELLERS, ROBERT E

ART UNIT PAPER NUMBER

1712

DATE MAILED: 04/24/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | |
|--|-------------------------------|-------------------------------|
| | Application No. 09/331,829 | Applicant(s) SUZUKI ET AL. |
| | Examiner Robert Sellers | Art Unit 1712 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 February 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

- 4) Claim(s) 6-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 6-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Disposition of Claims

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

A Request for Continued Examination has been filed February 15, 2002 (Paper No. 20). The following response addresses the preliminary amendment filed on the same day.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Nos. 5,194711 and 6-329570 and Asai et al.

The rejection is maintained for the reasons of record set forth in the previous Office actions. The arguments filed February 15, 2002 have been considered but are unpersuasive.

The tetrakisphenol clathrate curing accelerator of claims 8 and 9 and defined as an optional component in claim 10 is shown in Japanese '711 (page 15, paragraph 13, 2,4,6-tris-(dimethylaminomethyl)phenol, o-dimethylaminomethylphenol, 2-methylimidazole, 2-ethyl-4-methylimidazole or 1,8-diazabicyclo-(4,5,0)-undecene-7 as an accelerator), Japanese '570 (nitrogen-containing heterocyclic compounds) and Asai et al. (col. 3, lines 47-51, nitrogen-containing heterocyclic compounds such as imidazole). It would have been obvious to employ the tetrakisphenol of Japanese '570 and Asai et al. as the clathrate compound for the accelerators of Japanese '711 in order to optimize the chemical stabilization.

Claim 10 denotes either a tetrakisphenol clathrate with an epoxy-reactive curing agent and/or a tetrakisphenol clathrate with an epoxy resin accelerator. None of the claims is limited to the tetrakisphenol clathrate itself as an epoxy resin accelerator.

The evidence presented in Table 1 (specification, page 24, Sample Nos. 10 and 24), Table 2 (page 25, Sample No. 32) and Table 3 (page 28, Sample Nos. 48, 50, 53 and 54) is reproduced in Table 1 on page 6 of the amendment after Final rejection mailed September 21, 2001 (Paper No. 16) except for the reporting of pot life results. Such values can only be validated by presentation in a 37 CFR 1.132 declaration since they were not originally revealed in the specification.

The evidence is not commensurate in scope with the claims with respect to a representative sampling of the myriad curatives and accelerators to be combined with the tetrakisphenol clathrate such as the diverse species described on page 7, the last paragraph, to page 10, line 10 of the specification.

The closest prior art clathrate is the bisphenol A shown on page 15, paragraph 14, item (14) of Japanese '711 due to the presence of two phenolic moieties which most closely resembles the claimed tetraphenol structure. Consequently, the sole valid comparison involves Sample No. 32 (1 mole tetrakisphenol ethane: 2 moles of 2-methylimidazole) vs. Sample No. 54 (1 mole bisphenol A vs. 1 mole of 2-methylimidazole). However, the testing of a single type of curative or accelerator does not establish the criticality of the various structurally and functionally diverse species within the ambit of the claims.

No sample calculations are presented to verify the allegation on page 4 of the preliminary amendment filed February 15, 2002 that the molar ratio of clathrate:epoxy groups is 0.1:1. There is no documentation to indicate that the UVR-6410 exhibited in Comparison Example 4 (page 33) is a diglycidyl ether of bisphenol A. Note that the mole ratio is expressed in claims 6, 9 and 10 as a ratio between the molar amount of clathrate containing the curative and the equivalents of epoxy groups within the epoxy resin. It is unclear whether the alleged molar ratio of 0.1:1 reflects the claimed units. Even if the alleged molar ratio is considered, the testing of a single molar ratio of 0.1:1 does not confirm the patentability of the claimed minimum of two orders of magnitude lower at 0.001:1.

The suggestion, teaching or motivation to utilize the tetrakisphenol clathrate of Japanese '570 and Asai et al. as the host compound of Japanese '711 resides firmly in Japanese '570 and Asai et al. wherein chemical stability (Japanese '570) and ease of release upon heating (Asai et al., col. 14, lines 33-35) are ascribed to a tetrakisphenol as a clathrate.

Japanese priority application no. 177468-1997 filed July 2, 1997 has not been received. The other three cited Japanese priority applications have been filed February 27, 1998 (Paper No. 7).

All claims are drawn to the same invention claimed in the parent application prior to the filing of this Request for Continued Examination under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing under 37 CFR 1.114. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

(703) 308-2399 (Fax no. (703) 872-9311)
Monday to Friday from 9:30 to 6:00 EST



Robert Sellers
Primary Examiner
Art Unit 1712